Art Unit 1103 MAILED Paper No. 12

Appeal No. 93-1235 MAR 29 1994 dem

ON BRIEF

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte Thomas T. Yamashita

Application for Patent filed August 23, 1990, Serial No. 07/572,492; which is a continuation-in-part of application Serial No. 07/242,951, filed September 9, 1988, now abandoned; which is a continuation-in-part of application Serial No. 07/354,155, filed May 19, 1989, now abandoned; which is a continuation-in-part of application Serial No. 07/490,351, filed March 8, 1990, now pending. Detoxification Of Soil.

Edward B. Gregg et al. for Appellant.

Primary Examiner - Ferris Lander

Before Winters, Meros and Kimlin, Administrative Patent Judges.

Kimlin, Administrative Patent Judge.

This is an appeal from the final rejection of claims 1-9, all the claims in the present application. Claim 1 is illustrative:

1. A method of degrading a toxic organic chemical in soil which comprises incorporating in the soil a nutrient medium favoring proliferation of micro-organisms added to or naturally present in the soil which directly attack and degrade the organic chemical or which acquire the ability to attack and degrade the toxic chemical.

No prior art has been relied upon by the examiner.

The following references are relied upon by the appellant and the Board:

Lovness	4,119,429	Oct. 10, 1978
Muir	4,952,229	Aug. 28, 1990

Kirk-Othmer Encyclopedia of Chemical Technology, Vol. 10, Third Edition, 1980, pages 80-81.

Appellant's claimed invention is directed to a method of treating soil to degrade toxic organic chemicals therein. The method entails incorporating into the soil a nutrient medium which favors proliferation of micro-organisms which degrade the toxic organic chemicals. The nutrient medium can be either added alone or in combination with the micro-organisms.

Appealed claims 1-9 stand rejected under 35 U.S.C. § 112, first and second paragraphs.

Upon careful review of the opposing arguments presented by appellant and the examiner, it is our finding that the claimed invention does not run afoul of the first and second paragraphs of § 112. Accordingly, we will not sustain the examiner's rejections.

It is the examiner's position that the metes and bounds of appellant's invention are virtually non-existent in the appealed claims, particularly with regard to the breadth of the claims which encompass a plethora of ingredients in unspecified

amounts. Our reading of the appealed claims does not lead to this conclusion.

The applicable law here is stated in *In re Moore*, 439 F.2d 1232, 169 USPQ 236 (CCPA 1971). In order to determine whether claim language sets forth the metes and bounds of an invention with a reasonable degree of precision and particularity, the language must be analyzed, not in a vacuum, but in light of the teachings of the prior art and the application disclosure as it would be interpreted by one having ordinary skill in the relevant art. In our view, the appealed claims specifically define the invention as adding to soil a nutrient medium which favors the proliferation of micro-organisms which degrade toxic chemicals present in the soil. The present specification and the prior art cited by appellant give abundant examples of nutrient mediums which accomplish this result. As here, where the specification and prior art exemplify many effective nutrient medium, it is not necessary that the claims be so specific for a proper understanding by the skilled artisan. Regarding the examiner's concern that "the claims could read on materials that could not possibly be used to accomplish the purposes intended," (page 5 of Answer), it is well settled that it is not the function of the claims to specifically exclude possible inoperable substances or ineffective reactant

proportions. *In re Dinh-Nguyen*, 492 F.2d 856, 181 USPQ 46 (CCPA 1974); *In re Kamal*, 398 F.2d 867, 158 USPQ 320 (CCPA 1968); *In re Sarett*, 327 F.2d 1005, 140 USPQ 474 (CCPA 1964).

Concerning the examiner's § 112, first paragraph, rejection, the examiner does not offer much of an explanation or reasoning in the Answer, except to say that "the claims as presently drafted are essentially an invitation to experiment" (page 5 of Answer). In our view, the present specification and the prior art cited by appellant gives sufficient guidance to the skilled artisan such that he/she need not resort to undue experimentation to be able to practice the claimed invention. We note that the examiner offers no comment, let alone rebuttal, of the prior art references relied upon by appellant to establish enablement. This, in itself, is clear error.

Accordingly, based on the foregoing, the examiner's rejections under § 112, first and second paragraphs, are reversed.

Under the provisions of 37 CFR § 1.196(b), we enter the following new grounds of rejection.

Claims 1-5 and 7-9 are rejected under 35 U.S.C. §§ 102/103 over Muir, a reference relied upon by appellant. Muir expressly discloses the steps of the claimed invention of adding to soil a nutrient medium containing micro-organisms which

degrade toxic chemicals. The nutrient medium is disclosed in the reference as performing the function of increasing microbial activity and levels in the soil, which meets the claim requirement of a nutrient medium favoring proliferation of micro-organisms. Muir does not specifically teach that the micro-organisms degrade toxic chemicals. However, the appealed claims do not recite any particular micro-organisms, but page 18 of the specification discloses that ***Bacillus subtilis*** and ***Pseudomonas fluorescens*** are effective micro-organisms which possess the property of degrading toxic chemicals. At the first table of column 4 of Muir, ***Bacillus subtilis*** and ***Pseudomonas fluorescens*** are expressly disclosed as micro-organisms for addition to a soil nutrient medium. Accordingly, we find that the soil nutrient mediums disclosed by Muir of necessity, or inherently, perform the claimed function of degrading toxic chemicals in soil. We also note that Muir teaches that the nutrient medium is to be applied to soil in agricultural, horticultural and forestry applications, which soil inevitably contains some toxic materials. We further note the particular relative nature of the claim term "toxic," which is not defined in any manner. Regarding the particular components of the nutrient medium recited in claim 3, Muir discloses the use of fulvic acid and humic acid, disclosed by appellant as carbon skeleton/energy

components, and micro-nutrient components such as zinc, iron, copper, manganese, calcium, etc. Muir also discloses the incorporation of sulfates, magnesium, phosphorus, potassium, and calcium, which appellant discloses in the specification as macro-nutrient components. Also, inasmuch as the present specification discloses that fulvic and humic acids are complexing agents, Muir also meets the limitation of claim 4. Likewise, Muir also discloses the addition of yeast, soybean and wheat to the nutrient medium, which meets the requirement of claim 5. Moreover, we find no objective evidence of record which establishes that the nutrient medium of Muir does not possess the toxic degrading characteristic of appellant's nutrient medium. *In re King*, 801 F.2d 1324, 231 USPQ 136 (Fed. Cir. 1986); *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977).

Claim 6 is rejected under 35 U.S.C. § 103 as being unpatentable over Muir in combination with ***Kirk-Othmer***. ***Kirk-Othmer*** evidences that it was known in the art to use lignosulfonate as an additive in soil fertilizers or nutrient medium. Accordingly, we are satisfied that it would have been obvious to the skilled artisan to include the known macro-nutrient in the nutrient medium of Muir. We note that appellant's specification attributes no criticality or unexpected result to the incorporation of a lignosulfonate.

In conclusion, based on the foregoing, the examiner's decision rejecting the appealed claims is reversed. A new ground of rejection has been entered by the Board under 37 CFR § 1.196(b).

Effective August 20, 1989, 37 CFR § 1.196(b) has been amended to provide that a new ground of rejection pursuant to the rule is not considered final for the purpose of judicial review under 35 U.S.C. § 141 or § 145.

Any request for reconsideration or modification of this decision by the Board of Patent Appeals and Interferences based upon the same record must be filed within one month from the date of the decision (37 CFR § 1.197). Should appellant elect to have further prosecution before the examiner in response to the new rejection under 37 CFR § 1.196(b) by way of amendment or showing of facts, or both, not previously of record, a shortened statutory period for making such response is hereby set to expire two months from the date of this decision.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a). See the final rule notice, 54 F.R. 29548 (July 13, 1989), 1105 O.G. 5 (August 1, 1989).

REVERSED - 37 CFR § 1.196(b)

Sherman D. Winters)
Administrative Patent Judge)
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Edward J. Meros) BOARD OF PATENT
Administrative Patent Judge) APPEALS
) AND
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